SUPPORT FOR THE AMENDMENT

Support for the amendment to claim 1 is found on page 24, line 3, and claims 5 and 7 as originally presented. No new matter would be added to this application by entry of this amendment. Upon entry of this amendment, claims 1, 4, 6 and 8 will now be active in this application with claims1, 4 and 6 being under active consideration.

REQUEST FOR RECONSIDERATION

The claimed invention is directed to a hair shampoo composition.

Hair shampoo detergent compositions containing alkyl ether sulfates have been used based on their pleasant feeling upon cleansing but can suffer from inferior foaming speed relative to alkyl sulfates of which they are an improvement thereof. Shampoo compositions which foam quickly yet have a pleasant feeling as well as have a conditioning effect on hair are sought.

The claimed invention addresses the problem by providing a hair shampoo composition comprising a specific amphipathic amide lipid, an ethylene oxide ether sulfate having a specified distribution of ethylene oxide units, and a cationic polymer, wherein the composition has a diluted pH of 1-5. Applicants have discovered that when the ethylene oxide ether sulfate has at least 70 wt.% or greater of sulfates where a=0-2, that the composition provides good shampoo performance in terms of foaming speed. Such a hair shampoo composition is nowhere disclosed or suggested in the cited prior art.

The rejections of claims 1-7 under 35 U.S.C. § 103(a) over Sakai et al. (U.S. 2006/0036046) or Sakai et al. (U.S. 2004/0156815) are respectfully traversed.

Each of the Sasaki et al. references have an earliest filing date with the U.S. patent office of December 24, 2003 a date which is after applicants' priority date of April 17, 2003 for JP 2003-112271. In order to perfect applicants' claim to priority, applicants enclose

herewith a certified English language translation of JP 2003-112271. A certified copy of JP 2003-112271 was filed with the U.S. patent office on April 16, 2004. Applicants respectfully request the full benefit of priority to JP 2003-112271. As applicants' priority date is prior to the earliest U.S. filing dates of each of U.S. 2004/0126815 and 2006/0036046 the two references are not believed to be available as prior art against the present application and withdrawal of this ground of rejection is respectfully requested.

The rejections of claims 1-7 under 35 U.S.C. § 103(a) over EP 1,166,766 in view of Sakai et al. U.S. '046, Sakai et al. U.S. '815, WO 97/35548 or WO97/35548 and combination of these references are respectfully traversed.

No Disclosure Of A Composition Containing Ethylene Oxide Ether Sulfates Having At Least 70 Wt.% Of Sulfates Where a=0-2

None of the cited prior art of record discloses or suggests a composition containing ethylene oxide ether sulfates having at least 70 wt.% of sulfates where a=0-2.

As discussed above, neither of the Sakai et al. were filed prior to applicants' priority date and accordingly should not be available as prior art against this application.

As to the remaining references, none of the references suggests a sulfate composition having at least 70 wt.% of the sulfates where a=0-2 nor 30-45 wt.% of sulfate where a=0, 17-27 wt.% of sulfate where a=1 and 10-20 wt.% of sulfate where a=2.

WO '548 at page 6, lines 4-5 merely describes an alkyl ether sulfate where the number of ethylene oxide units range from 1-8. This reference fails to suggest an amount of at least 70 wt.% of sulfate where a=0-2 nor quantify the amounts as claimed of sulfate where a=0, a=1 and a=2.

EP '766 generically describes a dermatologic composition which generically contains surfactants such as anionic, cationic, nonionic or amphoteric surfactants such as alkyl ether

sulfate, alkyl sulfate or olefin sulfonate (paragraph [0022]). This reference fails to suggest an amount of at least 70 wt.% of sulfate where a=0-2 nor quantify the amounts as claimed of sulfate where a=0, a=1 and a=2.

In contrast, the claimed invention is directed to a hair shampoo composition in which a sulfate surfactant comprises 30-45 wt.% of sulfate where a=0, 17-27 wt.% of sulfate where a=1 and 10-20 wt.% of sulfate where a=2, the balance of sulfates are where a=3 or greater, and an amount of at least 70 wt.% of alkyl sulfates exhibiting a=0-2. As there is no suggestion in the reference to suggest an amount of at least 70 wt.% of sulfates where a=0-2 nor the specifically quantified amounts of sulfates where a=0, a=1 and a=2, the claimed invention is clearly not rendered obvious from the disclosures of these references. How can it be obvious to select an amount of sulfate where a=0-2 of at least 70 wt. % and comprises 30-45 wt.% of sulfate where a=0, 17-27 wt.% of sulfate where a=1 and 10-20 wt.% of sulfate where a=2, when the reference provides no suggestion of any importance to the distribution and degree of ethyleneoxide oxylation? It clearly would not have been obvious to have selected such a distribution and degree of ethoxylation and accordingly withdrawal of the rejections under 35 U.S.C. §103(a) is respectfully requested.

No Disclosure Of The Claim Limitation Of A Ph Of From 1 To 5 At 25°C When Diluted To 20 Times Its Weight With Water

Notwithstanding the deficiencies of the cited references to disclose or suggest the claimed sulfate surfactant ratios, the references also fail to disclose or suggest the claim limitation of a pH of from 1 to 5 at 25°C when **diluted to 20 times its weight with water.**

Hoshowski et al U.S. '715 has been cited for a disclosure of a hair shampoo-conditioner composition having a pH of from 2.5 to less than 7. The reference describes at column 13, lines 58-65 that acid is added to neutralize polymeric amidoamine compound and

to adjust the final pH to from about 2.5 to less than 7. However, there is no disclosure of the pH of 1 to 5 when **diluted to 20 times its weight with water**.

In contrast, the claimed invention is directed to a hair shampoo composition in which the pH is from 1 to 5 when **diluted to 20 times its weight with water**. Applicants note that claim 1 has been amended to include this limitation previously appearing in claim 7.

As the cited combination of references fails to disclose or suggest the claim limitation of a pH of 1 to 5 at 25°C when diluted to 20 times its weight with water the claimed invention is clearly not obvious over these references and withdrawal of the rejections under 35 U.S.C. §103(a) is respectfully requested.

No Suggestion of Improved Foaming Speed

Moreover, applicants observe an unexpected improvement in foaming speed when the composition of the sulfate surfactant is as claimed. The examiner's attention is directed to the data appearing in Table 2 on page 29 of the specification. The data compares the foaming speed of compositions containing both the amphipathic amide lipid and a sulfate as claimed as compared with a sulfate which has less than 70 wt.% of alkyl sulfate as claimed nor the claimed distribution of sulfate where a=0, a=1 and a=2. For the Examiner's convenience, Table 2 in the specification is reproduced below.

Table 2

(wt.%)

		Examples			Comparative Examples		
		1	2	3	1	2	3
(A)	Amphipathic amide lipid A	2	2	-	-	2	2
	Amphipathic amide lipid B	-	-	2	-	-	-
(B)	Sulfate 1	10	-	10	10	-	-
	Sulfate 2	-	10	-	-	-	-
	Comparative sulfate 1	-	-	-	-	10	-
	Comparative sulfate 2	-	-	-		-	10
Others	Dimethylpolysiloxane emulsion *1	2	2	2	2	2	2
	Myristyl alcohol	1	1	1	1	1	1
	Cocoylmonoethanolamide	0.5	0.5	0.5	0.5	0.5	0.5
	Ethylene glycol distearyl ester	1	1	1	1	1	1
	Cationic hydroxyethylcellulose	0.3	0.3	0.3	0.3	0.3	0.3
	Cationic guar gum	0.5	0.5	0.5	0.5	0.5	0.5
	Malic acid	1	1	1	1	1	1
	50 wt.% NaOH aq. soln/50 wt.% citric acid	q.s.*2	q.s.*2	q.s.*2	q.s.*2	q.s.*2	q.s.*2
	Purified water	Bala-nce	Bala-nce	Bala-nce	Bala-nce	Bala-nce	Bala-nce
pH		3.5	3.5	3.5	3.5	3.5	3.5
Buffering capacity (NgOH-gram equivalent/L)		0.01	0.01	0.01	0.01	0.01	0.01
Evalu-ation	Foaming speed	A	A	A	C	C	C
	Lubricated feeling of foam	18	20	20	9	15	7
	Gloss and manageability	19	20	15	6	18	18
	Resilience and strength of hair	20	19	17	9	11	12

*1: "CF-2460" (trade name; product of Dow Corning Toray Silicone, a 75 wt.% emulsion, average particle size: about 100 μm)

*2: Amount enough for pH adjustment

Comparative sulfate 1 and comparative sulfate 2 have a total amount of sulfate surfactant where a=0-2 of 67.86 and 51.99, far below the claimed amount of at least 70 wt.%. The foaming speeds of these compositions were evaluated to occur from 200 to less than 300 seconds.

In contrast, Examples 1 and 2 containing the same amphipathic amide lipid but sulfates 1 and 2, sulfates having 77.73 and 72.29 wt.% of sulfate surfactant where a=0-2, exhibited foaming speeds **less than 100 seconds**. Thus, applicants have demonstrated an improved rate of foaming by selection of an alkyl sulfate distribution as claimed. Applicants note that the claims have been amended to recite the structure of amphipathic amide lipid A